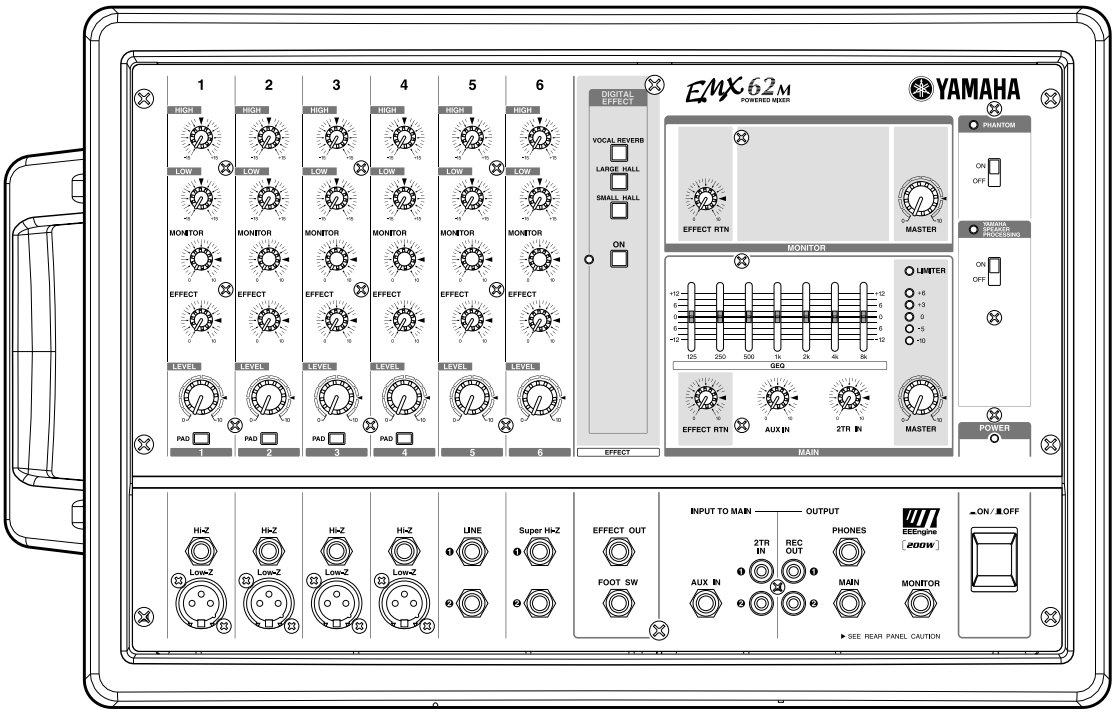
YAMAHA

EMX62M

POWERED MIXER

Owner's Manual

EEEngine



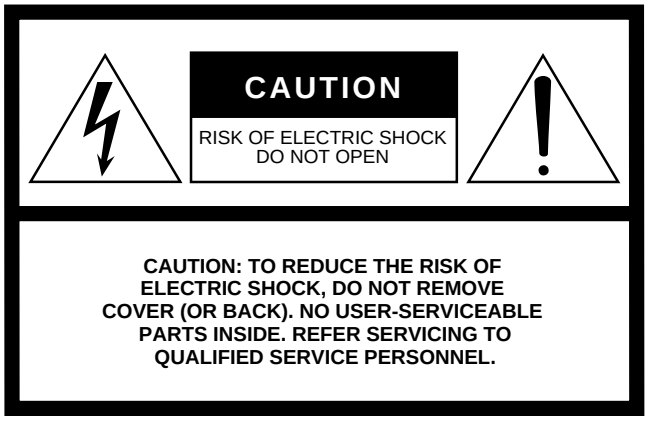
Keep This Manual For Future Reference.

E

FCC INFORMATION (U.S.A.)

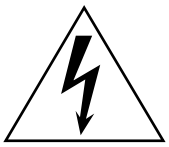
1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT! This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.
2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures: Relocate either this product or the device that is being affected by the interference. Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s. In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable. If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA 90620

   The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The above warning is located on the rear of the unit.

• Explanation of Graphical Symbols



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

GREEN-AND-YELLOW :	EARTH
BLUE :	NEUTRAL
BROWN :	LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured GREEN and YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured GREEN and YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

* This applies only to products distributed by YAMAHA KEMBLE MUSIC (U.K.) LTD.

Precautions

WARNING

Installation

- Connect this unit's power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- Do not place heavy objects, including this unit, on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.
- The power to this device is not completely shut off even when the power switch is turned off. Locate the device close to the AC outlet so you can easily reach the power plug.
- Use only the included power cord for this unit. Using other types may be a fire and electrical shock hazard.

Operation

- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.
- Do not modify the unit. Doing so is a fire and electrical shock hazard.
- If lightning begins to occur, turn off the power switch of the unit as soon as possible, and unplug the power cable plug from the electrical outlet.
- If there is a possibility of lightning, do not touch the power cable plug if it is still connected. Doing so may be an electrical shock hazard.

In case an abnormality occurs during operation

- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- Should this unit be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, and contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.

CAUTION

Installation

- Hold the power cord plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.
- This unit has ventilation holes at the rear to prevent the internal temperature rising too high. Do not block them. Blocked ventilation holes are a fire hazard.
- When rack-mounting the unit, allow enough free space around the unit for normal ventilation. This should be10 cm at the sides, 15 cm behind, and 25 cm above.
  For normal ventilation during use, remove the rear of the rack or open a ventilation hole.
  If the airflow is not adequate, the unit will heat up inside and may cause a fire.

Operation

- Use only speaker cables when connecting speakers to amplifier outputs. Using other types of cables is a fire hazard.

Maintenance

- Clean the contacts of the phone plug before connecting it to the SPEAKERS jack of this unit. Dirty contacts may generate heat.

PRECAUTIONS FOR OPERATION – FOR CORRECT OPERATION –

Connector pin assignments

- XLR-type connectors are wired as follows: pin 1: ground, pin 2: hot (+), and pin 3: cold (-).

Replacing abrasive parts

- The performance of components with moving contacts, such switches, rotary controls, faders, and connectors, deteriorates over time. The rate of deterioration depends on the operating environment and is unavoidable. Consult your dealer about replacing defective components.

Influence on cell phone usage

- Using a cell phone (mobile telephone) near this unit may induce noise. If noise occurs, use the telephone away from the unit.

Volume level setting

- Do not set all equalizer controls and faders to maximum. Doing so may cause oscillation depending on the condition of the connected unit and speakers, and may damage the speakers.

Introduction

Thank you for purchasing the Yamaha EMX62M Powered Mixer. In order to take full advantage of the EMX62M and enjoy long and trouble-free operation, read this owner's manual carefully, and keep it in a safe place for future reference.

Features

- The EMX62M's six input channels support a wide range of audio sources, including microphones, instruments, and line-level devices. Input channels 1 through 4 feature low- and hi-impedance balanced inputs, with +15 V phantom power for use with condenser-type microphones on the low inputs, input channel 5 features two line-level inputs, while input channel 6 features two hi-impedance inputs for connecting instruments such as electric-acoustic guitar and electric bass directly.
- The built-in power amplifier offers a maximum output of 200 W with a 4Ω speaker system, 135 W with an 8Ω speaker system, and a limiter circuit prevents sounds distortion and speaker damage.
- The 7-band graphic equalizer on the main output allows you to tailor the sound for each particular venue and reduce the risk of feedback by attenuating troublesome frequencies.
- Also built-in is a digital effects processor, offering three different programs for adding reverberation or ambiance to vocal or instrument sounds, and remote on/off control using an optional footswitch.
- External effects can be patched into the system via the EFFECT OUT and AUX IN jacks, with effects return level control.
- Separate outputs are provided for connecting powered monitor speakers, headphones, or a stereo recorder (cassette, DAT, or MD).
- The EMX62M has implemented "EEEngine", Yamaha's epochal amp drive technology to create an unrivaled high-efficiency drive. The EEEngine's energy-saver/low-heat-generation design has reduced power consumption to 50% or less, and reduced heat generation to 35% or less (in field applications, compared to Yamaha's previous models), and has lead to a reduction in energy cost and to less-restrictive installation requirements related to heat generation.

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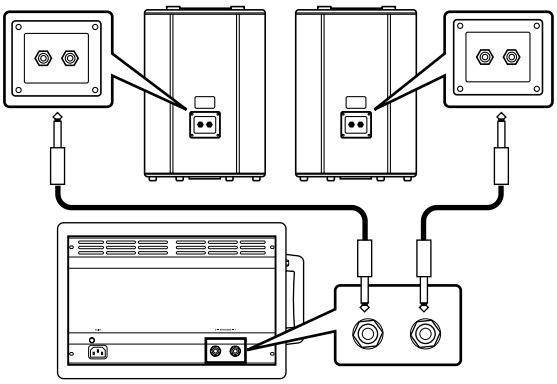
EMX62M Quick Guide

The following steps (1-5) explain the basic connection and operation of the EMX62M.
Also, please read "Front and Rear Panel" and "Basic Operation" following this Quick Guide section to learn more about using the EMX62M.

STEP 1 Connection

Connecting speakers

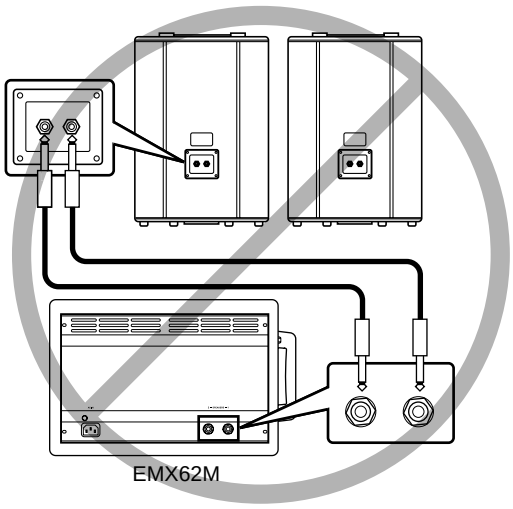
Using speaker cables, connect each speaker to the SPEAKERS 1 and 2 jack on the rear panel of the EMX62M.



EMX62M

- The EMX62M is a monaural mixer. The same signal will be output from all SPEAKERS jacks on the rear panel. You do not need to differentiate right from left speakers.
- You may connect to either of the two jacks on the speakers.
- Be sure to use a cable designed for speaker connection.

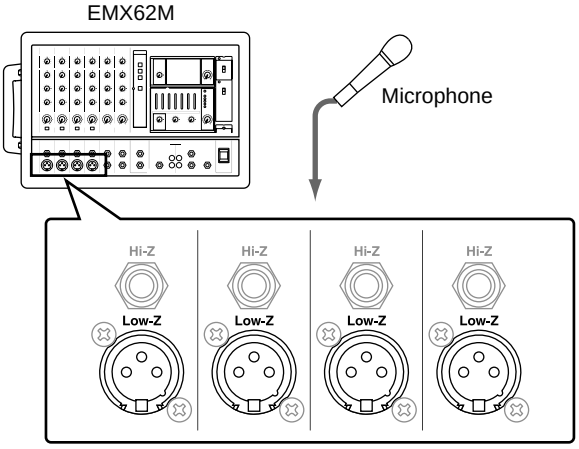
Never connect the speakers in the manner shown below. Otherwise, the EMX62M's built-in power amplifier will be damaged.



EMX62M

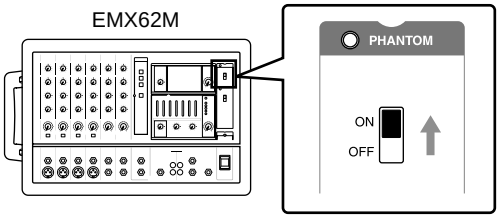
Connecting a microphone

Make sure that the power is turned off to the EMX62M.
Connect a microphone to the Low-Z jack of channel 1-4.



Using a condenser microphone

Turn on the PHANTOM switch (located in the upper right corner on the panel).

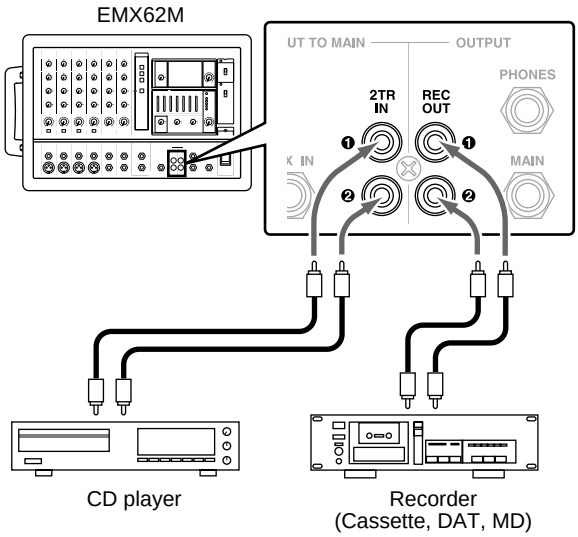


PHANTOM switch

- Do not connect or disconnect a condenser microphone while the power to the unit is on and the PHANTOM switch has been turned on.

Connecting a CD player, MD player, and/or cassette deck

Connect a CD player or MD player to the 2TR IN jacks. Refer to the operation manual of the corresponding device for more information on the input and output of the device.



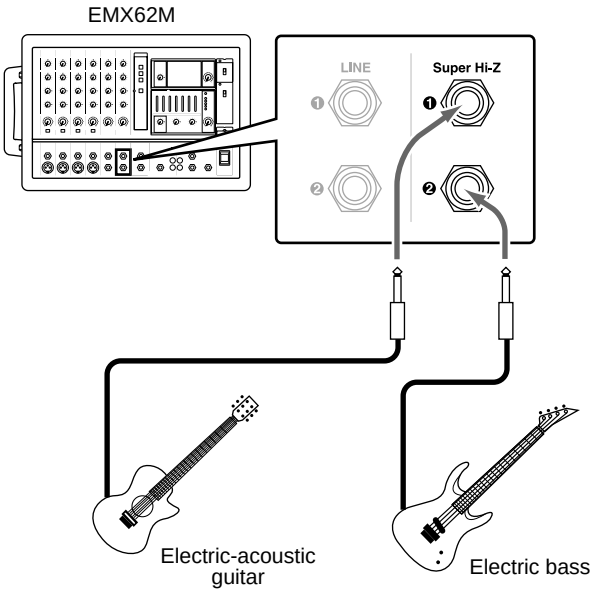
CD player

Recorder
(Cassette, DAT, MD)

- To connect a second player, use the LINE jack or Hi-Z jack.
- You cannot use the Hi-Z jack and the Low-Z jack for the same channel at the same time. If a microphone has already been connected to the Low-Z jack of a channel, you cannot connect a player to the Hi-Z jack of the channel.
- Connect a recorder to the REC OUT jacks.

Connecting an electric acoustic guitar or electric bass

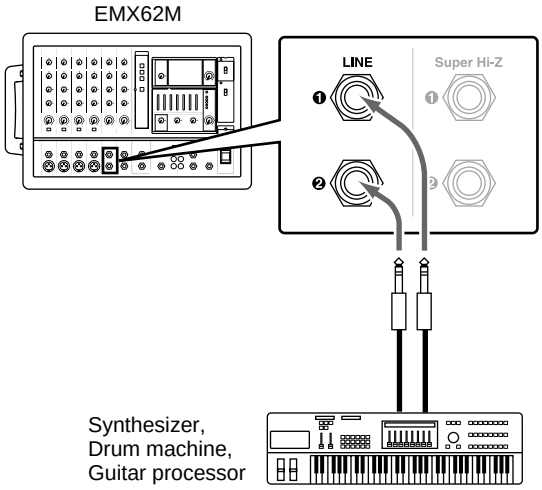
Connect an electric acoustic guitar or electric bass to the Super Hi-Z jacks.
You can use either or both of the 1 and 2 jacks.



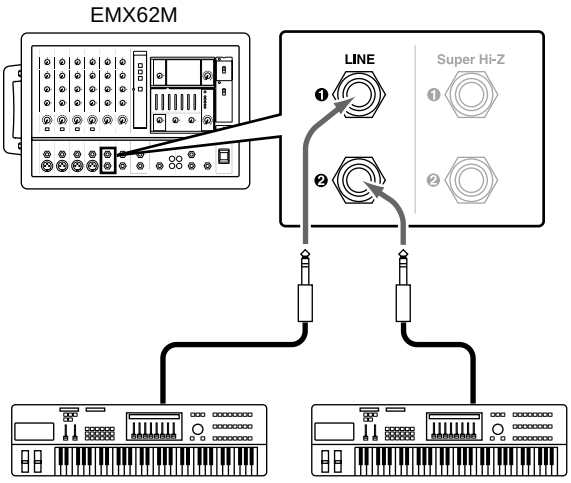
- If you wish to use a guitar signal processor or bass effect unit, connect them to the Hi-Z jack or LINE jack. You cannot use the Hi-Z jack and the Low-Z jack for the same channel at the same time. If a microphone has already been connected to the Low-Z jack of a channel, you cannot connect the effect unit to the Hi-Z jack of the channel.

Connecting an electronic musical instrument

To the EMX62M's LINE jacks, you can connect an electronic musical instrument such as a synthesizer, drum machine, signal processor connected to an electric guitar, etc. Refer to the diagram below to make a stereo connection from the output jacks (such as L/MONO and R) of an electronic musical instrument to the LINE jacks in stereo.



If you wish to connect multiple instruments, make a monaural connection as shown below.

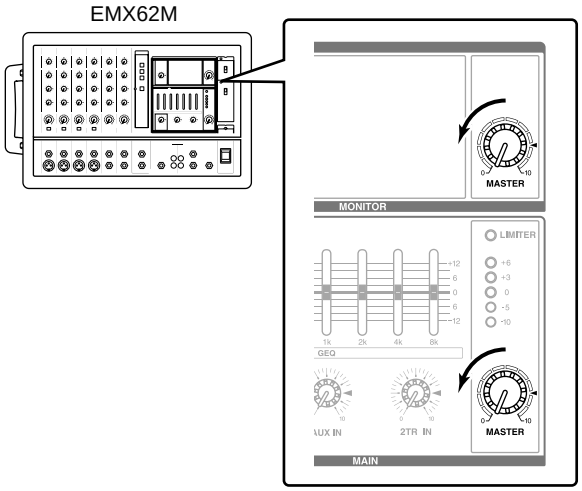


- You can also use the Hi-Z jacks and Super Hi-Z jacks to connect multiple instruments. You cannot use the Hi-Z jack and the Low-Z jack for the same channel at the same time. If a microphone has already been connected to the Low-Z jack of a channel, you cannot connect an instrument to the Hi-Z jack of the channel.

STEP 2 Power on

1 Turn on the power to all external devices connected to the EMX62M.

2 Make sure that the MASTER controls in the MONITOR section and the MAIN section are set to “0,” then press the POWER switch on the EMX62M to turn on the power.

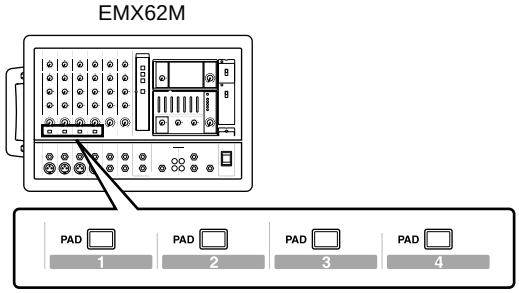


- Be sure to follow the power up sequence specified above to prevent the speakers from being damaged.
- The speakers do not have a power switch.

STEP 3 Sound output

Set the MASTER control in the MAIN section to “◄ ,” then while playing an instrument connected to a channel to be checked (or while speaking to a connected microphone), adjust the LEVEL control of the corresponding channel so that the 0 LED of the peak level indicator in the MAIN section will light up momentarily.

- Do not press the PAD switch if sound is input from the microphone. Otherwise, press the PAD switch on.



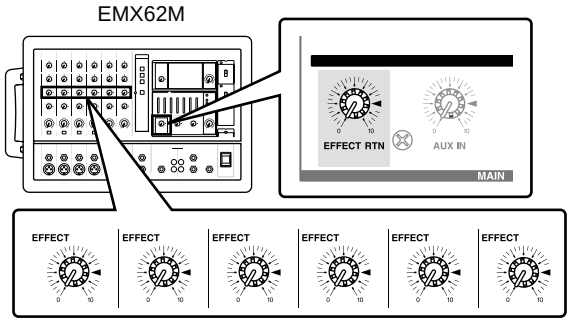
- Note that if the LIMITER indicator stays lit for a long time, the built-in amplifier and speakers may be damaged.
- To correct the low range, turn on the YAMAHA SPEAKER PROCESSING switch in the upper right corner of the panel.

STEP 4 Applying built-in effects

1 Turn on the ON switch in the DIGITAL EFFECT section. The ON switch indicator lights up.

2 Select one of three effect types, then press the switch.

3 Adjust the amount of effect applied by using the EFFECT control of the target channel and the EFFECT RTN control in the MAIN section.



STEP 5 Power off

1 Press the POWER switch of the EMX62M to turn off the power to the unit.

2 Turn off the power to all connected devices.

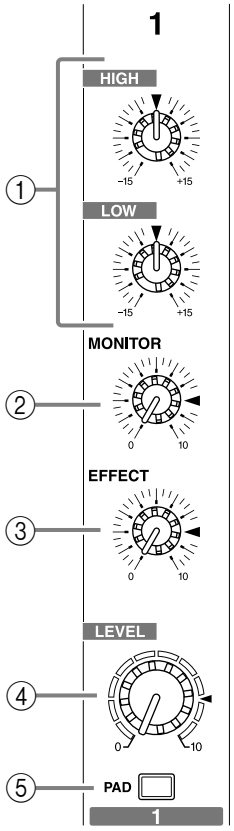
- Be sure to follow the power off sequence specified above to prevent the speakers from being damaged.
- Set the MASTER controls in the MAIN section and the MONITOR section to “0” for use next time (so that a loud noise will not sound the next time you turn on the power to the unit).

Front & Rear Panels

Control Panel

■ Channel Section

The channel controls are used to set the EQ, MONITOR and EFFECT send levels, channel LEVEL, and PAD for each channel.



1 HIGH & LOW EQ controls

The 2-band equalizer allows you to boost or cut the low or high frequency range for each channel. The frequency response is flat when the controls are in the center (▼) position. Rotating clockwise boosts frequencies, rotating counterclockwise cuts them.

The center frequencies are as follows:

HIGH:	10 kHz	±15 dB	shelving type
LOW:	100 Hz	±15 dB	shelving type

B MONITOR control

The MONITOR control determines the level of the input signal that is fed to the MONITOR bus and subsequently the MONITOR OUTPUT jack (input/output panel ⑩).

The MONITOR control is not affected by the channel's LEVEL control ④, since the MONITOR signal is sourced before that control.

C EFFECT control

The EFFECT control determines the level of the input signal that is fed to the EFFECT bus and subsequently the onboard effects processor and EFFECT OUT jack (input/output panel ④).

EFFECT bus signals are fed simultaneously to the onboard effects processor and the EFFECT OUT jack for use with external effects processors.

The EFFECT bus signals are affected by the channel's LEVEL control ④, since the EFFECT signal is sourced after the EFFECT control. To send a channel signal to the EFFECT bus, both the EFFECT and LEVEL controls must be turned up.

D LEVEL control

The LEVEL control determines the level of the input signal that is fed to the MAIN bus and internal power amplifier.

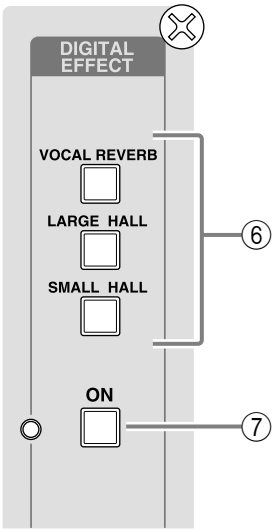
The MAIN bus signal is routed to the MAIN OUTPUT jack (input/output panel ⑨), SPEAKERS 1 and 2 jacks (rear panel ①), and PHONES jack (input/output panel ⑪).

E PAD switch (1–4 only)

The PAD switch attenuates the input signal by 30 dB. When connecting a line-level source to inputs 1 through 4, or if a microphone signal is distorted, use the PAD switch to attenuate the input signal.

■ DIGITAL EFFECT Section

The DIGITAL EFFECT section is used to turn the built-in digital effects processor on and off and select effects programs.



F VOCAL REVERB, LARGE HALL, SMALL HALL switches

These switches are used to select the effects programs: VOCAL REVERB, LARGE HALL, SMALL HALL.

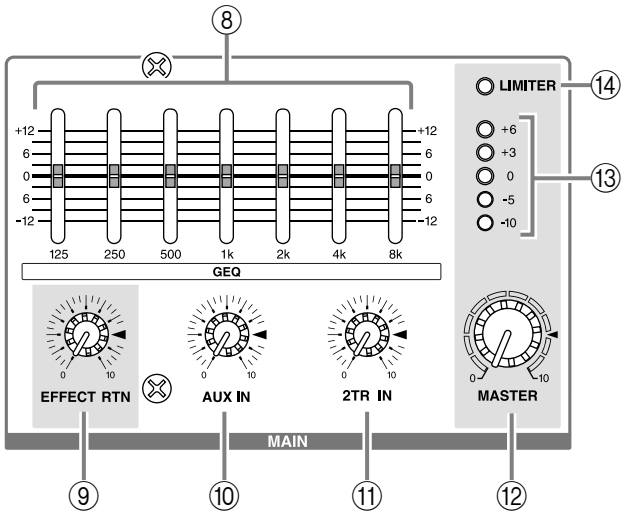
G DIGITAL EFFECT ON switch & indicator

The DIGITAL EFFECT ON switch is used to turn the built-in digital effects processor on and off. The indicator lights up when the processor is on. When the processor is on, its output is fed to the MAIN and MONITOR buses via the MAIN EFFECT RTN ⑨ and MONITOR EFFECT RTN ⑮ controls respectively.

The effects processor can also be turned on and off remotely by connecting an optional footswitch to the FOOT SW jack.

■ MAIN Section

The MAIN section is used to set the MAIN MASTER level, 7-band graphic equalizer, AUX IN and 2TR IN levels, and MAIN EFFECT RTN level. It also contains the LIMITER indicator and main output level meter.



H Graphic equalizer

The 7-band graphic equalizer is used to boost or cut certain frequencies of the MAIN output signal by up to ±12 dB. It affects the MAIN OUTPUT signal, the speaker outputs, and the PHONES.

I EFFECT RTN control

The MAIN EFFECT RTN control determines the level of the signal from the built-in digital effects processor that is fed to the MAIN bus and subsequently the MAIN outputs.

J AUX IN control

The AUX IN control determines the level of the AUX IN signal that is fed to the MAIN bus and subsequently the MAIN outputs.

K 2TR IN control

The 2TR IN control determines the level of the 2TR IN signal that is fed to the MAIN bus and subsequently the MAIN output.

L MASTER control

The MAIN MASTER control determines the output level of the MAIN OUT, speaker outputs, and PHONES.

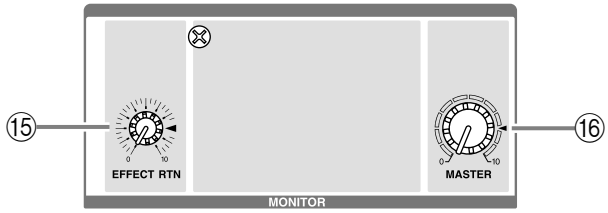
M **Peak level indicator**
This indicator indicates the level of the signal output from the MAIN OUTPUT jack (input/output panel ⑨). Adjust the MASTER control ⑫ so that this indicator lights up only momentarily to avoid distortion.

N **LIMITER indicator**
The LIMITER indicator lights up when the limiter circuit, which is designed to protect the internal power amplifier against excessive input signals and load mismatches, activates.

Note: Do not let the LIMITER indicator light up or flash for a long period of time. Otherwise, the power amplifier would be under excessive loads, which might lead to a malfunction of the unit.

■ MONITOR Section

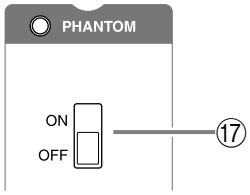
The MONITOR section is used to set the MONITOR MASTER level and MONITOR EFFECT RTN level.



O **EFFECT RTN control**
The MONITOR EFFECT RTN control determines the level of the signal from the built-in digital effects processor that is fed to the MONITOR bus and subsequently the MONITOR OUTPUT.

P **MASTER control**
The MONITOR MASTER control determines the output level of the MONITOR OUTPUT.

■ PHANTOM switch and indicator



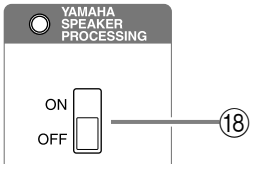
Q **PHANTOM switch and indicator**
This switch turns the phantom power supply on/off for the Low-Z input jacks of channels 1–4. When the switch is turned on, the indicator lights up.

Turn this switch off if you do not use it.

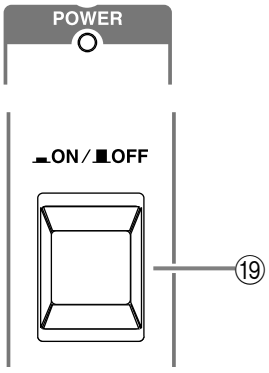
■ YAMAHA SPEAKER PROCESSING

R **ON/OFF switch**
This switch enables you to compensate the low range of the speakers. The low range balance when this switch is on varies depending on the speakers.

First, check the low range balance by auditioning the resultant sound, then set this switch to on or off.



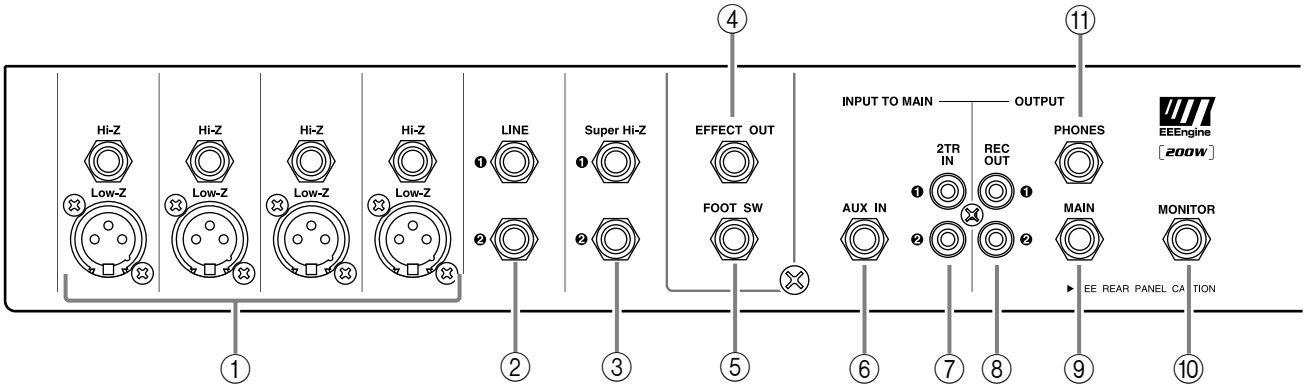
■ Power switch and indicator



S **Power ON/OFF switch and indicator**
This switch turns the power of the EMX62M on/off. When the switch is turned on, the indicator lights up.

Note: Before turning the EMX62M on/off, turn down the MASTER controls of the MONITOR and MAIN section.

Input/Output Panel



1 Hi-Z, Low-Z (inputs 1–4)

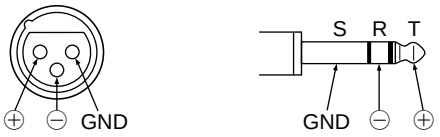
These are the input connectors for input channels 1 through 4.

Both the Hi-Z and Low-Z input can be used with microphones and, by using the PAD switch (control panel ⑤), can also be used with line-level sources, such as synthesizers and drum machines. Switchable +15 V phantom power is available to the Low-Z XLR-type input for use with condenser-type microphones.

Both the Hi-Z and Low-Z inputs are balanced.

Pin connections are as follows.

Low-Z (XLR-type)	Hi-Z (TRS phone jack)
Pin 1: ground	Sleeve: ground
Pin 2: hot (+)	Ring: cold (–)
Pin 3: cold (–)	Tip: hot (+)



Note: The Low-Z and Hi-Z input of each channel cannot be used simultaneously. Use the input appropriate for the source.
Since phantom power is turned on and off for inputs channels 1 through 4 simultaneously, input devices that do not require it should be connected to the Hi-Z input when phantom power is used.

B LINE 1 & 2 (input 5)

These two phone jacks are the input connectors for input channel 5. They are unbalanced, can be used simultaneously, and are appropriate for use with line-level sources, such as synthesizers and drum machines.

C Super Hi-Z 1 & 2 (input 6)

These two phone jacks are the input connectors for input channel 6. They are unbalanced, can be used simultaneously, and their high input impedance makes them ideal for use with instruments such as electric-acoustic guitar and electric bass. They can also be used with line-level sources, such as synthesizers and drum machines.

D EFFECT OUT jack

The EFFECT OUT phone jack outputs the signal from the EFFECT bus and can be connected to the input of an external effects processor.

E FOOT SW jack

The FOOT SW jack is used to connect an optional footswitch, such as the Yamaha FC5, which can be used to turn the built-in digital effects processor on and off. The DIGITAL EFFECT ON switch must be in the ON position in order to use the footswitch.

F AUX IN—INPUT TO MAIN jack

The AUX IN—INPUT TO MAIN phone jack is used to feed signals from an external source to the MAIN bus and can be connected to the output of an external effects processor, for example.

G 2TR IN—INPUT TO MAIN jacks

The 2TR IN—INPUT TO MAIN phono jacks are used to feed signals from an external source to the MAIN bus and can be connected to the stereo outputs of a cassette, DAT, or MD deck.

H REC OUT—OUTPUT jacks

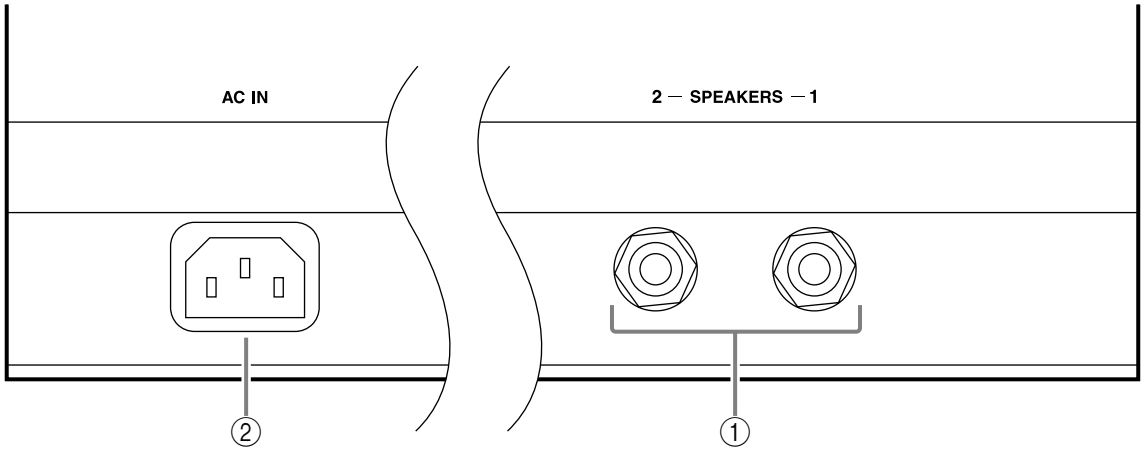
The REC OUT—OUTPUT phono jacks output the MAIN bus signal prior to the 7-band graphic equalizer and MASTER level control, and can be connected to the stereo inputs of a cassette, DAT, or MD deck for recording.

I **MAIN—OUTPUT jack**
The MAIN—OUTPUT phone jack outputs the MAIN bus signal after the 7-band graphic equalizer and MASTER level control, and can be connected to the input of a larger mixer, or a more powerful amplifier, for example.

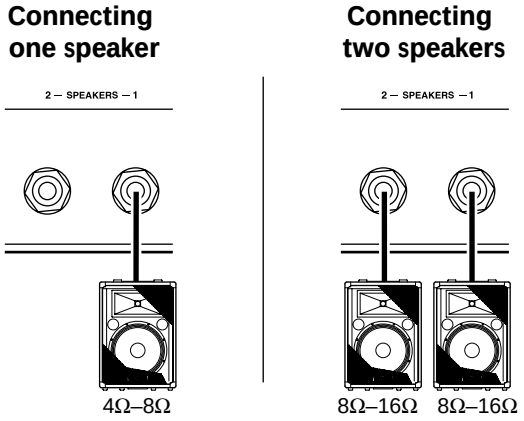
J **MONITOR—OUTPUT**
The MONITOR—OUTPUT phone jack outputs the MONITOR bus signal after the MONITOR MASTER control, and can be connected to the input of a powered monitor speaker.

K **PHONES—OUTPUT jack**
The PHONES—OUTPUT phone jack outputs the MAIN bus signal after the 7-band graphic equalizer and MASTER level control, and can be connected to a pair of stereo headphones for personal monitoring.

Rear Panel



1 **SPEAKERS 1 & 2 jacks**
The SPEAKER 1 & 2 phone jacks output the main signal from the internal power amplifier and are used to connect speakers. They are internally connected in parallel and output the same signal.

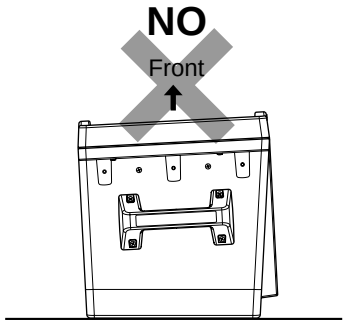


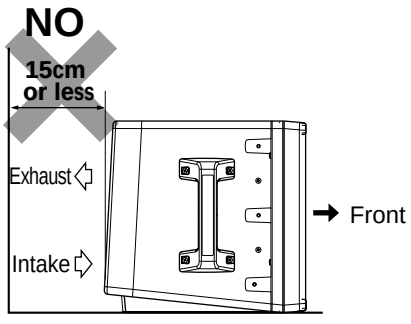
Note: The total impedance of the connected speaker system must be between 4 and 8 ohms. This means that you can connect one speaker system with an impedance of between 4 and 8 ohms to one SPEAKER jack, or two speaker systems each with an impedance of between 8 and 16 ohms to each SPEAKER jack. Do not connect anything other than speakers to these jacks.

B **AC IN socket**
Connect the included power cord to this socket. Connect the plug of the power cord to an AC outlet that meets the requirements stated in the specifications in this document.

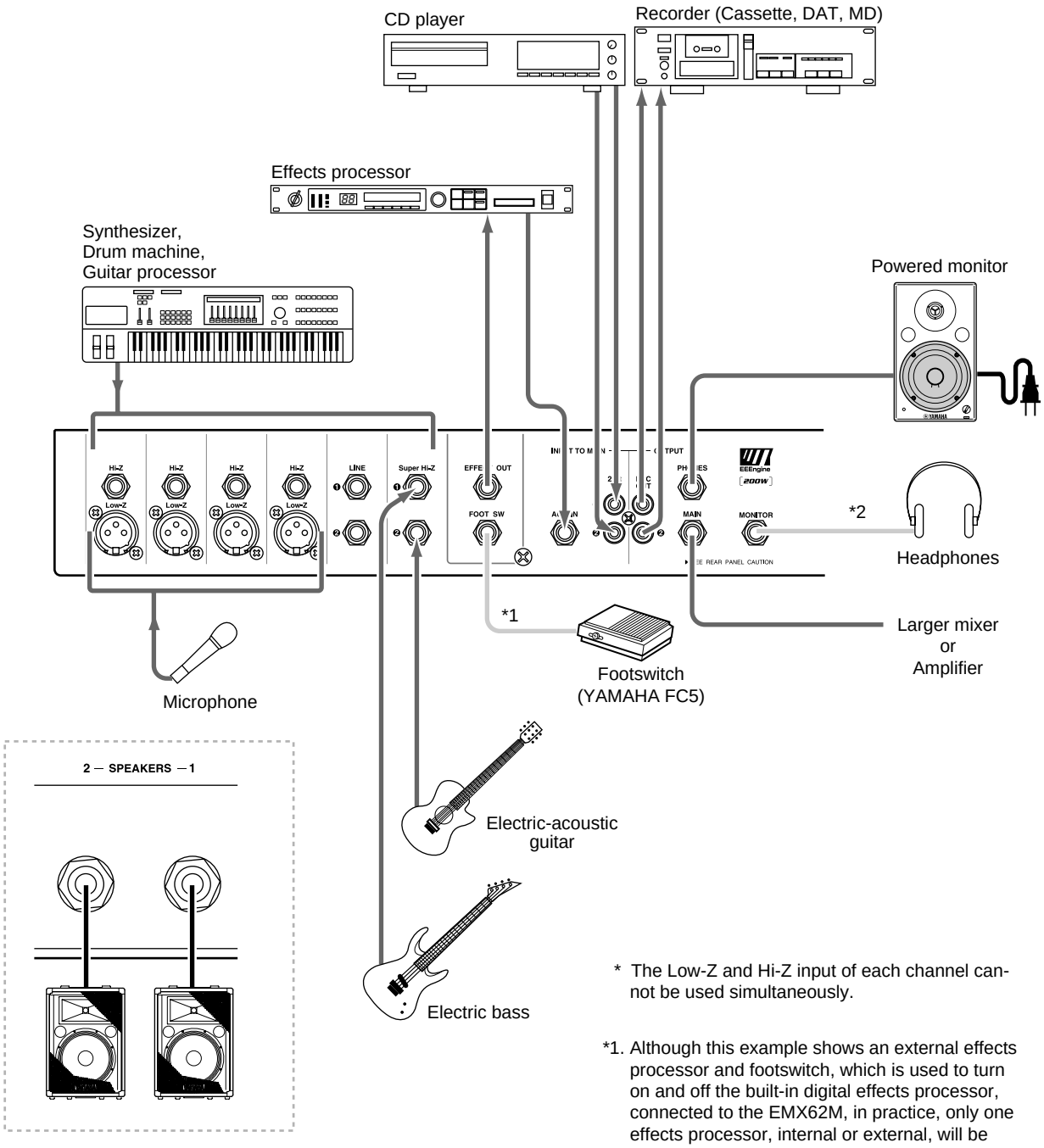
Installation

The EMX62M uses a forced cooling system with intake on the bottom of the rear panel and exhaust on the top of the rear panel to avoid blocking the heated air flow.





Hookup Example



* The Low-Z and Hi-Z input of each channel cannot be used simultaneously.

*1. Although this example shows an external effects processor and footswitch, which is used to turn on and off the built-in digital effects processor, connected to the EMX62M, in practice, only one effects processor, internal or external, will be used at a time, so the footswitch is not required when using external effects.

*2. This example shows both headphones and a powered monitor being used for monitoring. In practice, however only one method is required.

Basic Operation

Connecting Sources

Before connecting any microphones or instruments, make sure that the EMX62M and any other applicable equipment is turned off. Also make sure that the LEVEL control on each EMX62M input channel, and the MAIN MASTER and MONITOR MASTER controls are turned down.

1 **Connect cables to your mics and instruments, and insert the other end of the cables firmly into the appropriate Low-Z or Hi-Z jack (channels 1–4), LINE jack (channel 5), or Super Hi-Z jack (channel 6).**

> *Note:* When connecting line-level sources to input channels 1 through 4, turn on the corresponding PAD switch.
> The Low-Z and Hi-Z jacks on input channels 1 through 4 cannot be used simultaneously.

B **Turn on the power, starting with the sound sources and finishing with the EMX62M.**
Reverse this order when turning off the power.

C **Set the MAIN MASTER control to the "◄" position.**

D **While speaking into a connected mic, or playing a connected instrument, adjust the input channel LEVEL control so that the 0 LED of the MAIN section level meter lights occasionally.**
Repeat this procedure for each channel.

E **Use the EQ controls on each input channel to adjust the tonal characteristics of each source.**

F **Use the 7-band graphic equalizer to adjust the tonal characteristics of the main output.**

G **Use the MAIN MASTER control to set the overall volume level of the main mix.**

Monitoring

By connecting a powered monitor speaker to the MONITOR OUTPUT, you can create a monitor mix independent of the MAIN mix, since the input channel MONITOR controls are not affected by the LEVEL controls.

1 **Set the MONITOR MASTER control to the "◄" position.**

B **While speaking into a connected mic, or playing a connected instrument, adjust the MONITOR control of the input channel that you want to monitor.**
Repeat this procedure for each channel.

C **Use the MONITOR MASTER control to set the overall level of the monitor mix.**

Using the Built-in Effects

The EMX62M features a built-in digital effects processor, allowing reverberation or ambiance to be added to vocals or instrument sounds.

1 **Turn on the digital effects processor by pressing the DIGITAL EFFECT ON switch.**
The DIGITAL EFFECT indicator lights up.

B **Use the DIGITAL EFFECT switches to select an effects program.**

VOCAL REVERB..... Reverb suitable for vocals.

LARGE HALL ..... Reverb typical of a large hall.

SMALL HALL ..... Reverb typical of a small hall.

C **Set the MAIN EFFECT RTN control to the "◄" position.**

D **While speaking into a connected mic, or playing a connected instrument, adjust the EFFECT control of the input channel that you want to process.**

E **Use the MAIN EFFECT RTN control to adjust the overall level of the processed sound.**

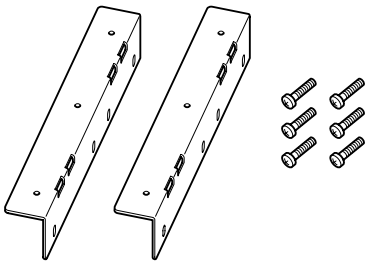
F **Use the MONITOR EFFECT RTN control to feed the processed signal to the MONITOR bus and subsequently MONITOR OUTPUT.**

> *Note:* If the processed sound is distorted even with an EFFECT RTN control turned down, turn down the EFFECT control on each channel.

Installing an optional rack mount kit

You can rack-mount the EMX62M using an optional rack mount kit (RK-88).

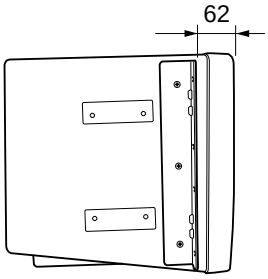
Rack mount kit RK-88
- Bracket × 2
- Screw × 6



Before you rack-mount the EMX62M, make sure that sufficient ventilation will be maintained. (Never install the unit in a sealed rack.)

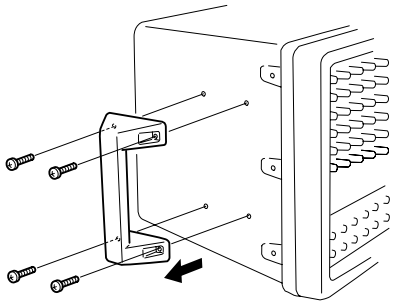
If you are going to install multiple devices including the unit in a rack, keep a 1U space or more between the devices. Use a blank panel with holes for ventilation if you wish to insert a panel between the devices.

You will need a 7U space to install the rack mount. After installation, the unit will project 62 mm from the front surface of the rack.

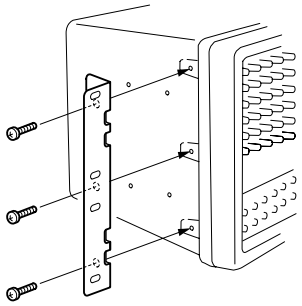


Installing the rack mount bracket

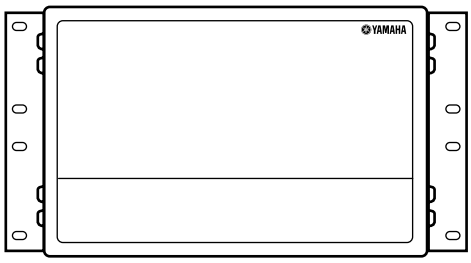
1 Remove the carrying handle by loosening and removing four screws.



2 Attach one of the rack mount brackets to the side of the EMX62M using three included screws.



3 Attach the other rack mount bracket in the same way.



Troubleshooting

The following table describes the possible malfunctions of this demvice, and the appropriate actions to be taken in each case.

Problem		Cause	Action
Sound is no longer output from the speakers.	The POWER indicator is lit.	The load on the amplifier of this device was too great, and the protection circuit for the amplifier has operated. Possible reasons for the excessive load are an excessive level setting in the channel control section or main section, insufficient ventilation, or insufficient load impedance of the connected speakers.	Please wait. When the device cools off, normal operation will resume automatically. However, please check the following three points to prevent the problem from recurring. • If the level setting is excessive, lower it to the nominal level. You can refer to the peak level indicators of the main section when doing so. • If the device is not ventilated sufficiently, refer to the cautions given at the beginning of this manual and take appropriate measures to insure adequate ventilation. • If the load impedance (including a short) is too low, refer to the section on rear panel (page 14) and change the connections so that the impedance is correct.
	Other	Connections between devices have come loose.	Inspect the connections, and correct any faulty connections.
		Other	The device may have malfunctioned. Please contact your dealer.
Unbalanced sound output from the speakers	No high range is heard from the speakers.	The speaker's protection circuit has been activated due to excessive input signals.	Turn off the power to the EMX62M, or lower the volume level. The EMX62M will return to its normal operation in several seconds. Then, turn on the power to the unit or raise the volume level and check to see if the high range is audible. Maintain the level so that the protection circuit will not be activated.

Powered Mixer Q&A

Q: The built-in effect is not effective.	**A:** The ON switch in the DIGITAL EFFECT section may not be turned on. Or, you have adjusted the EFFECT control in the Channel section or the MAIN EFFECT RTN control.
Q: The monitoring sound from the speakers is not powerful enough relative to the level of the input sound.	**A:** The equalizer LOW control for each channel may be set to negative values.
Q: The stereo output from the synthesizer has been routed to the Super Hi-Z jack of channel 6, but the monitoring sound is not stereo.	**A:** You can use Super Hi-Z (or LINE) 1 and 2 jacks at the same time. However, they are internally routed into a mono channel, and therefore the signals from 1 and 2 jacks are output as mono signal.
Q: The signal is sent from the EFFECT OUT jack to the connected effect processor. Then the effect sound is returned to the AUX IN jack. However, no signal is input to the mixer.	**A:** The AUX IN control in the MAIN section may not be rotated to right.
Q: An external powered speaker is connected to the MONITOR-OUTPUT jack. However, the signal is not sent to the speaker even when the MASTER control in the MONITOR section is turned.	**A:** The MONITOR controls for input channels may not have been adjusted.
Q: Can the Low-Z jack and the Hi-Z jack be used at the same time?	**A:** You cannot use the Low-Z jack and the Hi-Z jack for the same channel at the same time.
Q: Can a single speaker be connected to the mixer?	**A:** Yes. Use a speaker with an impedance of 4-8 ohms.

Specifications

■ General Specifications

Maximum output power	135 W/8Ω @0.5% THD at 1 kHz (SPEAKERS OUT) 200 W/4Ω @0.5% THD at 1 kHz (SPEAKERS OUT) 175 mW/40Ω @0.5% THD at 1 kHz (PHONES OUT)	
Frequency response	20 Hz–20 kHz +1 dB, –3 dB @1 W output into 8Ω (SPEAKERS OUT) 20 Hz–20 kHz +1 dB, –3 dB @+4 dB output into 10 kΩ (MAIN OUT, MONITOR OUT, EFFECT OUT)	
Total harmonic distortion	Less than 0.5% @20 Hz–20 kHz, 100 W output into 4Ω (SPEAKERS OUT) Less than 0.3% @20 Hz–20 kHz, +14 dB output into 10 kΩ (MAIN OUT, MONITOR OUT, EFFECT OUT)	
Hum & noise (Average, Rs=150Ω) (with 20 Hz–20 kHz BPF)	–124 dB equivalent input noise, –68 dB residual output noise (SPEAKERS OUT)	
	–88 dB residual output noise (MAIN OUT, MONITOR OUT)	
	–79dB (83 dB S/N) (MAIN OUT, MONITOR OUT)	Master level control: nominal level Channel level controls: minimum
	–69 dB (73 dB S/N) (MAIN OUT, MONITOR OUT)	Master level control: nominal level 1 channel level control: nominal level
	–75 dB (79 dB S/N) (EFFECT OUT)	All channel level controls: minimum
	–69 dB (73 dB S/N) (EFFECT OUT)	1 channel level control: nominal level
Maximum voltage gain	86 dB CH IN (Lo-Z) to SPEAKERS OUT (CH1–4) 66 dB CH IN (Lo-Z) to MAIN OUT, MONITOR OUT (CH1–4) 66 dB CH IN (Lo-Z) to EFFECT OUT (CH1–4) 48 dB CH IN (Lo-Z) to REC OUT (CH1–4) 56 dB CH IN (Hi-Z) to MAIN OUT, MONITOR OUT (CH1–4) 26 dB LINE IN to MAIN OUT (CH5) 26 dB AUX IN to MAIN OUT 22 dB 2TR IN to MAIN OUT 46 dB Super Hi-z IN to MAIN OUT (CH6)	
Crosstalk at 1 kHz	65 dB adjacent input, 65 dB input to output	
Input channel equalization	±15 dB Maximum HIGH 10 kHz shelving * LOW 100 Hz shelving * * Turn over/roll-off frequency of shelving: 3 dB below maximum variable level.	
Meters	5 points LED Meter (–10, –5, 0, +3, +6 dB) MAIN OUT	
Graphic equalizer	7 bands (125, 250, 500, 1k, 2k, 4k, 8k Hz) MAIN OUT ±12 dB Maximum	
Internal digital effect	3 programs (VOCAL REVERB, LARGE HALL, SMALL HALL)	
Phantom power	+15 V (balanced input)	
Limiter	Comp. : THD≥0.5% (SPEAKERS OUT)	
LIMIT indicator	Turn on. : THD≥0.5% (SPEAKERS OUT)	
Protection circuit (Power amp)	POWER switch on/off mute DC detection Temp (Heatsink Temp≥90°C)	
Foot switch (FC5)	DIGITAL EFFECT MUTE : on/off	
Optional accessories	RK-88, FC5	
Power requirement	USA and Canada: 120 V AC 60 Hz Europe: 230 V AC 50 Hz Other: 240 V AC 50 Hz	
Power consumption	110 W	
Dimensions (WxHxD)	482×305×328 mm	
Weight	12 kg	
Supplied accessories	AC power cord, Owner's Manual	

For European Model
Purchaser/User Information specified in EN55103-1 and EN55103-2.
Inrush Current: 23A
Conformed Environment: E1, E2, E3 and E4

■ Input Specifications

Input connectors	PAD	Actual load impedance	Nominal impedance	Input level			Connector type
				Sensitivity*1	Nominal level	Max. before cliping	
CH INPUT (Lo-Z) (CH1–4)	OFF	3 kΩ	50–600Ω Mics	–62 dB (0.616 mV)	–50 dB (2.45 mV)	–20 dB (77.5 mV)	XLR-3-31 type*2
	ON		600Ω Lines	–32 dB (19.5 mV)	–20 dB (77.5 mV)	+10 dB (2.45 V)	
CH INPUT (Hi-Z) (CH1–4)	OFF	10 kΩ	50–600Ω Mics	–52 dB (1.95 mV)	–40 dB (7.75 mV)	–10 dB (245 mV)	Phone jack (TRS)*2
	ON		600Ω Lines	–22 dB (61.6 mV)	–10 dB (245 mV)	+20 dB (7.75 V)	
LINE IN (CH5) (1–2)		10 kΩ	600Ω Line	–22 dB (61.6 mV)	–10 dB (245 mV)	+20 dB (7.75 V)	Phone jack*3
Super Hi-Z IN (CH6) (1–2)		470 kΩ	1kΩ	–42 dB (6.16 mV)	–30 dB (24.5 mV)	0 dB (0.775 V)	Phone jack*3
AUX IN		10 kΩ	600Ω Line	–22 dB (61.6 mV)	–10 dB (245 mV)	+20 dB (7.75 V)	Phone jack*3
2TR IN (1–2)		10 kΩ	600Ω Line	–22 dBV (79.4 mV)	–10 dBV (316 mV)	+17.8 dBV (7.76 V)	Phono jack

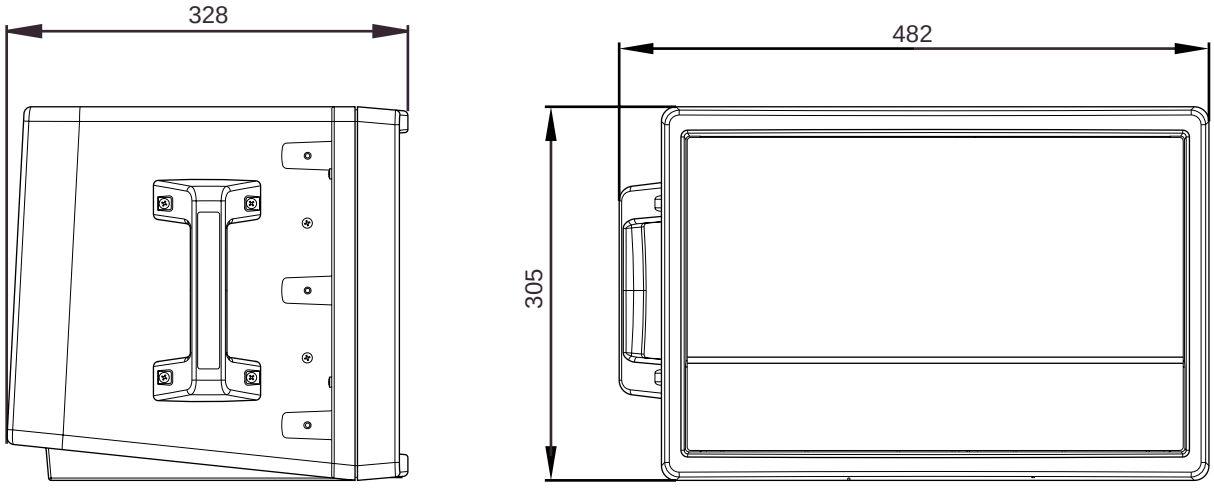
*1. Sensitivity is the lowest level that can produce an output of +4 dB (1.23 V) or the nominal output level when the unit is set at maximum gain. (All level controls are at maximum position.)
*2. Balanced.
*3. Unbalanced.
• 0 dB= 0.775 Vrms, 0 dBV= 1 Vrms.

■ Output Specifications

Output connectors	Actual source impedance	Nominal impedance	Output level		Connector type
			Nominal	Max. before cliping	
SPEAKERS OUT (1, 2)	0.1Ω	4/8Ω Speaker	40 W/4Ω	200 W/4Ω	Phone jack
MAIN OUT	600Ω	10 kΩ Lines	+4 dB (1.23 V)	+20 dB (7.75 V)	Phone jack
MONITOR OUT	600Ω	10 kΩ Lines	+4 dB (1.23 V)	+20 dB (7.75 V)	Phone jack
EFFECT OUT	600Ω	10 kΩ Lines	+4 dB (1.23 V)	+20 dB (7.75 V)	Phone jack
PHONES OUT	35Ω	40 Ω Phones	33 mW	175 mW	Phone jack
REC OUT (1, 2)	600Ω	10 kΩ Lines	–10 dBV (316 mV)	+10 dBV (7.75 V)	Phono jack

• PHONE JACKS are unbalanced.
• 0 dB= 0.775 Vrms, 0 dBV= 1 Vrms.

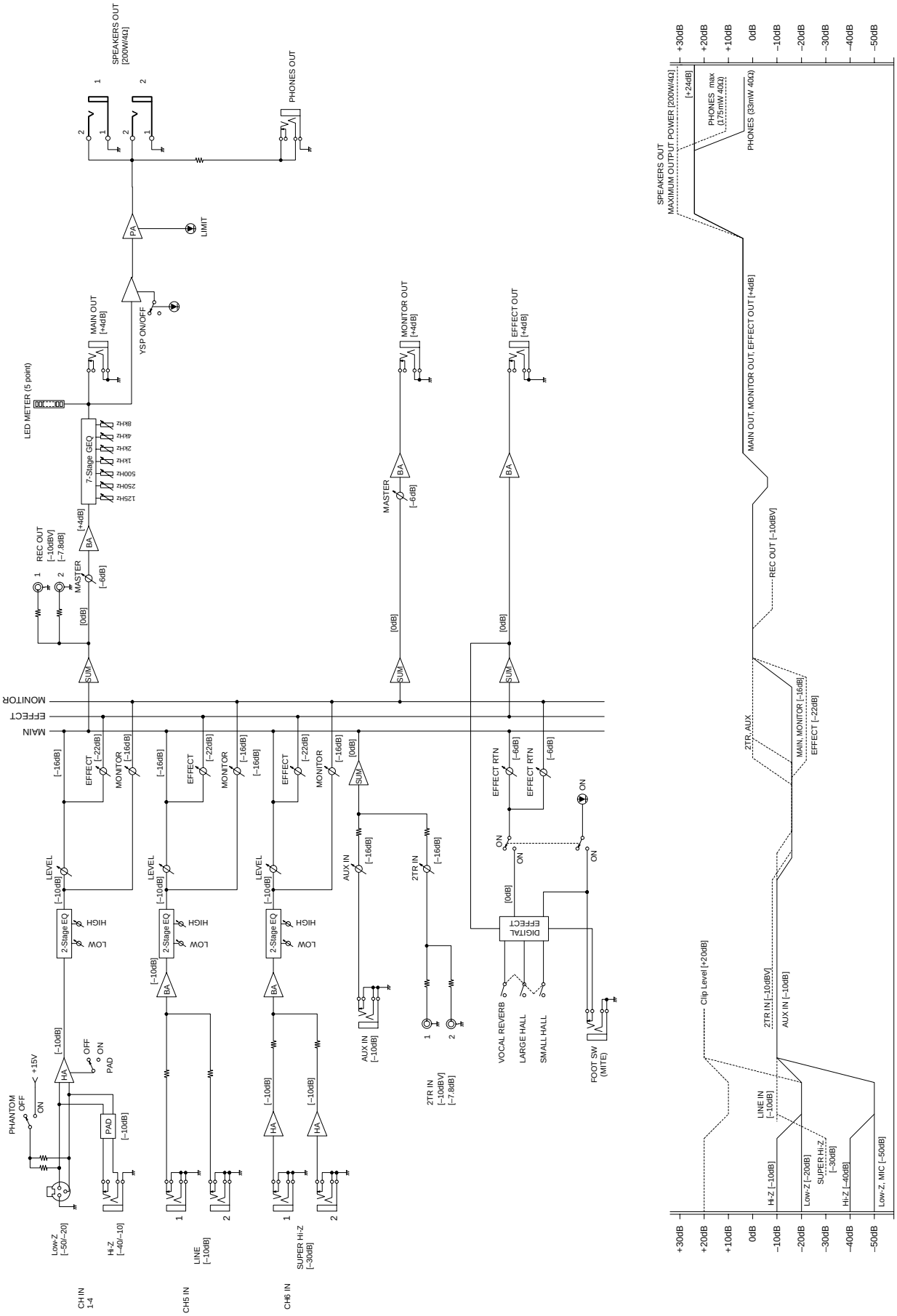
■ Dimensions



Unit: mm

Specifications are subject to change without prior notice.

■ Block & Level Diagrams



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